

Listing of Claims:

1. (Currently Amended) A Mobile computing device that can be configured to operate both as a USB host or a USB device comprising:

a processor, wherein an operating system of the mobile computing device instructs the processor to operate as a USB controller and the USB controller that can be configured function as a USB controller configured to operate as a USB host or a USB device and the processor is operationally coupled to a first power conversion circuit in the mobile computing device;

a housing having an expansion module bay for receiving an expansion module that includes a circuit for providing an expansion module function including a game card and/or a modem functionality an expansion card;

wherein the expansion module card is operationally coupled to the mobile computing device via a first USB connector in the expansion module and a second USB connector positioned in the housing to mate with the first USB connector; and the circuit ~~expansion card~~ interfaces with a USB interface and a second power conversion circuit, which is coupled between the USB interface and the first USB connector in the expansion module; and the first and second USB connectors have a form factor that is different than a standard USB form factor; and at any given time only the first power conversion circuit or the second power conversion circuit performs power conversion specified by convention, wherein the expansion module can be configured as a USB device by using the USB interface having a USB bus interface and a layer that handles routing data between the bus interface and plural endpoints.

2. (Cancelled)

3. (Previously Presented) The device of claim 1, wherein the first and second connectors have a form factor that is smaller than a standard USB form factor.

4. (Currently Amended) The device of Claim 1, wherein the second power conversion circuit includes a voltage sensor for sensing a voltage signal on the first USB connector and the sensed voltage signal is supplied to a controller of the first power conversion circuit that determines whether the sensed voltage signal should be boosted, reduced or passed through and if the sensed voltage signal is to be boosted, then the controller commands a first switch to send the sensed voltage signal to a charge pump that provides a boosted voltage to a second switch.
~~The device of claim 1, further comprising a USB controller inside the housing of the mobile computing device.~~

5. (Currently Amended) ~~The device of Claim 4, wherein the USB controller is configured to function as a USB host.~~ The device of Claim 4, wherein if the sensed voltage signal is to be reduced, then the controller commands the first switch to send the sensed voltage signal to a voltage regulator and the output of the voltage regulator is sent to the second switch.

6. (Currently Amended) ~~The device of claim 4, wherein the USB controller is configured to function as a USB device~~ The device of Claim 4, wherein if the sensed voltage signal is to be passed through then the controller commands the first switch to send the sensed voltage signal directly to the second switch

7. (Cancelled)

8. (Previously Presented) The device of claim 1, wherein the second power conversion circuit reduces the voltage of a signal on the first USB connector to a corresponding interface

voltage and provides the reduced voltage to the interface if the voltage on the first USB connector is higher than the corresponding interface voltage.

9. (Previously Presented) The device of claim 1, wherein the second power conversion circuit boosts the voltage of a signal on the first USB connector to a corresponding interface voltage and provides the boosted voltage to the interface if the voltage on the first second USB connector is less than the corresponding interface voltage.

10. (Previously Presented) The device of claim 1, wherein the second power conversion circuit reduces the voltage of an interface signal to a voltage expected at the first connector and provides the reduced voltage to the first connector if the interface voltage is greater than expected.

11. (Previously Presented) The device of claim 1, wherein the second power conversion circuit boosts the voltage of an interface signal to a voltage expected at the first connector and provides the boosted voltage to the first connector if the interface voltage is less than expected.

12. (Cancelled)

13. (Currently Amended) The device of claim 12, wherein the first power conversion circuit reduces the voltage of a signal on the second USB connector to a corresponding controller voltage and provides the reduced voltage to the controller if the voltage on the second USB connector is higher than the corresponding controller voltage.

14. (Currently Amended) The device of claim 12, wherein the first power conversion circuit boosts the voltage of a signal on the second USB connector to a corresponding controller voltage and provides the boosted voltage to the controller if the voltage on the second USB connector is less than the corresponding controller voltage.

15. (Currently Amended) The device of claim 12, wherein the first power conversion circuit reduces the voltage of a controller signal to a voltage expected at the second connector and provides the reduced voltage to the second connector if the controller voltage is greater than the corresponding voltage expected at the second connector.

16. (Currently Amended) The device of claim 12, wherein the first power conversion circuit boosts the voltage of a controller signal to a voltage expected at the second connector and provides the boosted voltage to the second connector if the controller voltage is less than the corresponding voltage expected at the second connector.

17. (Previously Presented) The device of claim 1, further comprising an adapter having a third connector that is connected to a fourth connector, the third connector being a USB connector having a standard USB form factor, the fourth connector configured to mate with one of the first and second connectors.

18. (Currently Amended) A Mobile computing device that can operate both as a USB host or a USB device comprising:

a housing having an expansion module bay for receiving an expansion module that includes a circuit for providing an expansion module function including a game card and/or a modem functionality ~~an expansion card~~ ;

a processor, wherein an operating system of the mobile computing device instructs the processor to operate as a USB controller and the USB controller ~~that can function as a USB controller~~ is configured to operate as a USB host or a USB device within the housing and the processor ~~is~~ is operationally coupled to a first power conversion circuit; and

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a USB connector with a non-standard form factor coupled to the USB controller; the USB connector positioned within the housing for operationally coupling the ~~expansion circuit~~ card to the mobile computing device via a USB interface and a second power conversion circuit, wherein at any given time only the first power conversion circuit or the second power conversion circuit perform power conversion as specified by convention; wherein the expansion module can be configured as a USB device by using the USB interface having a USB bus interface and a layer that handles routing data between the bus interface and plural endpoints; and wherein the first power conversion circuit includes a voltage sensor for sensing a voltage signal on the USB connector and a sensed voltage signal is supplied to a controller of the first power conversion circuit that determines whether the sensed voltage signal should be boosted, reduced or passed through and if the sensed voltage signal is to be boosted, then the controller commands a first switch to send the sensed voltage signal to a charge pump that provides a boosted voltage to a second switch.

19. (Currently Amended) The device of claim 18, wherein if the sensed voltage signal is to be reduced, then the controller commands the first switch to send the sensed voltage signal to a voltage regulator and the output of the voltage regulator is sent to the second switch and if the sensed voltage signal is to be passed through then the controller commands the first switch to send the sensed voltage signal directly to the second switch. ~~the USB connector has a non-standard USB form factor.~~

20. (Cancelled)

21. (Previously Presented) The device of claim 18, wherein the first power conversion circuit reduces the voltage of a signal on the USB connector to a corresponding controller volt-

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age and provides the reduced voltage to the controller if the voltage on the USB connector is higher than that corresponding controller voltage.

22. (Previously Presented) The device of claim 18, wherein the first power conversion circuit boosts the voltage of a signal on the USB connector to a corresponding controller voltage and provides the boosted voltage to the controller if the voltage on the USB connector is less than the corresponding controller voltage.

23. (Previously Presented) The device of claim 18, wherein the first power conversion circuit reduces the voltage of controller signal to a voltage expected at the USB connector and provides the reduced voltage to the USB connector if the controller voltage is greater than the corresponding voltage expected at the USB connector.

24. (Previously Presented) The device of claim 18, wherein the first power conversion circuit boosts the voltage of a controller signal to a voltage expected at the USB connector and provides the boosted voltage to the USB connector if the controller voltage is less than the corresponding voltage expected at the USB connector.

25. (Currently Amended) The device of claim 18, wherein the mobile computing device is a personal digital assistant, pocket compute and/or cellular phone. ~~the USB controller is a USB host.~~

26. (Cancelled)

27. (Cancelled)

28. (Currently Amended) An expansion module for a mobile device having a first power conversion circuit ~~that can operate both as a USB host or a USB device~~, the expansion module comprising:

a USB interface operationally coupled to a processor in the mobile device, wherein the processor that can function as a USB controller when configured by the mobile device operating system to operate as a USB host or a USB device; and wherein the USB interface is operationally coupled to a first second power conversion circuit; and to a circuit for providing an expansion module function including a game card and/or a modem functionality an expansion card coupled to the USB interface and a second power conversion circuit for providing expansion module function; and a USB connector that couples the expansion module to the mobile device; for the USB interface wherein at any given time only the first power conversion circuit or the second power conversion circuit performs power conversion as specified by convention; wherein the expansion module can be configured as a USB device by using the USB interface having a USB bus interface and a layer that handles routing data between the bus interface and plural endpoints and wherein the second power conversion circuit includes a voltage sensor for sensing a voltage signal on the USB connector and a sensed voltage signal is supplied to a controller of the second power conversion circuit that determines whether the sensed voltage signal should be boosted, reduced or passed through and if the sensed voltage signal is to be boosted, then the controller commands a first switch to send the sensed voltage signal to a charge pump that provides a boosted voltage to a second switch and if the sensed voltage signal is to be reduced, then the controller commands the first switch to send the sensed voltage signal to a voltage regulator and the output of the voltage regulator is sent to the second switch and if the sensed voltage signal is to be passed through then the controller commands the first switch to send the sensed voltage signal directly to the second switch.

29. (Previously Presented) The device of claim 28, wherein the USB connector has a non-standard USB form factor.

30. (Cancelled)

31. (Previously Presented) The device of claim 28, wherein the second power conversion circuit reduces the voltage of a signal on the USB connector to a corresponding interface voltage and provides the reduced voltage to the interface if the voltage on the USB connector is higher than the corresponding expansion module voltage.

32. (Previously Presented) The device of claim 28, wherein the second power conversion circuit boosts the voltage of a signal on the USB connector to a corresponding interface voltage and provides the boosted voltage to the interface if the voltage on the USB connector is less than the corresponding expansion module voltage.

33. (Previously Presented) The device of claim 28, wherein the second power conversion circuit reduces the voltage of an interface signal to a voltage expected at the USB connector and provides the reduced voltage to the USB connector if the interface voltage is greater than the corresponding voltage expected at the USB connector.

34. (Previously Presented) The device of claim 28, wherein the second power conversion circuit boosts the voltage of an interface signal to a voltage expected at the USB connector and provides the boosted voltage to the USB connector if the interface voltage is less than the corresponding voltage expected at the USB connector.

35. (New) The device of Claim 1, wherein the mobile computing device is a personal digital assistant, pocket compute and/or cellular phone.